Testimony of
Jay C. Mealy, Programs Director
Academy of Model Aeronautics
before the
Committee on Transportation and Infrastructure
Subcommittee on Aviation
U. S. House of Representatives
Regarding
Unmanned Aerial Vehicles and the National Airspace System

Good afternoon Chairman Mica, ranking Member Costello, and Members of the Aviation Subcommittee. My name is Jay Mealy and I am Programs Director for the Academy of Model Aeronautics, Inc. (AMA), (Academy), a nationally recognized membership organization exempt from federal income tax under section 501 (c) (3) of the Internal Revenue Code of 1986. On behalf of the Academy and our members I would like to thank you for this opportunity to represent the sport of aeromodeling and am personally honored to be before you today.

Background

The Academy of Model Aeronautics has been in existence as a separate entity since 1936 and has grown to represent more than 170,000 members nationwide who participate in the sport of building and flying model aircraft. Prior to 1936 we were part of the National Aeronautics Association (NAA) through which we were represented to the world governing body of sport aviation: the Fédération Aéronautique Internationale (FAI). Since our establishment we have represented our members to the FAI directly.

The Academy charters over 2500 clubs and sanctions more than 2000 flying events annually, the largest of which is the National Aeromodeling Championships. This competition is hosted every year at the International Aeromodeling Center, which is co-located with our Headquarters, in Muncie, Indiana, during the month of July and traditionally involves over 1200 participants, their families, and spectators.

We are also responsible for supporting our national teams, representing the United States in world aeromodeling competitions, and hosting numerous world competitions in this country on a regular basis. These programs and activities have established the United States as a recognized leader in the sport of aeromodeling.

The Academy's mission as a world-class association of modelers is focused on promotion, development, education, and advancement of modeling activities. The Academy provides leadership, organization, competition, communication,

protection, representation, recognition, education, and scientific/technical development to modelers.

The Academy is also dedicated to model aviation as an educational tool for the formal classroom as well as informal afterschool clubs, activities, and camps. Through an active educational outreach program the Academy supports classroom teachers and leaders of community groups who wish to infuse topics of math, science, and technology with engaging aviation activities. The AMA seeks to introduce young men and women to the art and craft of aeromodeling as well as increase their ability to make informed decisions as future citizens of a changing and increasingly complex world.

Since our inception we have worked closely with local, state, and federal agencies to establish and ensure the high level of professionalism and safety that our members exhibit, and the general public has come to expect, in a sport as beneficial as building and flying model aircraft. The sport spans all socioeconomic boundaries and brings together families, friends, communities, and even countries in an atmosphere of camaraderie, competition, education and recreation. Building and flying model aircraft develops such important life skills as creativity, patience, goal setting, and perseverence, no matter what age it is entered into. Aeromodeling allows participants to experience pride in accomplishment, helps develop a spirit of teamwork, and has inspired many notable contributors to the success of our nation, not only through aviation but through other vocations and avocations as well.

The Academy has established a long and cooperative working relationship with such government agencies as the Federal Communications Commission (FCC), the Federal Aviation Administration (FAA), the Department of Defense (DOD), and the Transportation Security Administration (TSA), to name a few. These relationships and interactions have demonstrated the valuable resources and talents possessed by the Academy and the Academy's willingness to utilize those resources and talents in meaningful resolutions to provide for the preservation of this sport for the benefit of future generations. Our successes in such endeavors have been essential in providing the opportunity to be before you today representing the sport of aeromodeling.

In 1972 the Academy realized the need for guidelines for modelers. "FAA was interested in the fact that AMA had a proposed safety code which could be utilized as a set of standards for addressing the operation of model aircraft within the National Airspace System"(1) **and that is when the original National Model Aircraft Safety Code was adopted-an historic event. It has evolved into the following document included for your review.**

(1) AMA Board minutes, February 12, 1972

Official
Academy of Model Aeronautics
National Model Aircraft Safety Code
Effective January 1, 2006

GENERAL

1. A model aircraft shall be defined as a non-human-carrying device capable of sustained flight in the atmosphere. It shall not exceed limitations established in this code and is intended to be used exclusively for recreational or competition activity.
2. The maximum takeoff weight of a model aircraft, including fuel, is 55 pounds, except for those flown under the AMA Experimental Aircraft Rules.
3. I will abide by this Safety Code and all rules established for the flying site I use. I will not willfully fly my model aircraft in a reckless and/or dangerous manner.
4. I will not fly my model aircraft in sanctioned events, air shows, or model demonstrations until it has been proven airworthy.
5. I will not fly my model aircraft higher than approximately 400 feet above ground level, when within three (3) miles of an airport without notifying the airport operator. I will yield the right-of-way and avoid flying in the proximity of full-scale aircraft, utilizing a spotter when appropriate.
6. I will not fly my model aircraft unless it is identified with my name and address, or AMA number, inside or affixed to the outside of the model aircraft. This does not apply to model aircraft flown indoors.
7. I will not operate model aircraft with metal-blade propellers or with gaseous boosts (other than air), nor will I operate model aircraft with fuels containing tetranitromethane or hydrazine.
8. I will not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device, which propels a projectile of any kind. Exceptions include Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight. Rocket motors up to a G-series size may be used, provided they remain firmly attached to the model aircraft during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code; however, they may not be launched from model aircraft. Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Air Show Advisory Committee Document.
9. I will not operate my model aircraft while under the influence of alcohol or within eight (8) hours of having consumed alcohol.
10. I will not operate my model aircraft while using any drug which could adversely affect my ability to safely control my model aircraft.
11. Children under six (6) years old are only allowed on a flightline or in a flight area as a pilot or while under flight instruction.
12. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

RADIO CONTROL

1. All model flying shall be conducted in a manner to avoid over flight of unprotected people.
2. I will have completed a successful radio equipment ground-range check before the first flight of a new or repaired model aircraft.
3. I will not fly my model aircraft in the presence of spectators until I become a proficient flier, unless I am assisted by an experienced pilot.
4. At all flying sites a safety line or lines must be established, in front of which all flying takes place. Only personnel associated with flying the model aircraft are allowed at or in front of the safety line. In the case of airshows or demonstrations a straight safety line must be established. An area away from the safety line must be maintained for spectators. Intentional flying behind the safety line is prohibited.
5. I will operate my model aircraft using only radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
6. I will not knowingly operate my model aircraft within three (3) miles of any preexisting flying site without a frequency-management agreement. A frequency-management agreement may be an allocation of frequencies for each site, a day-use agreement between sites, or testing which determines that no interference exists. A frequency-management agreement may exist between two or more AMA chartered clubs, AMA clubs and individual AMA members, or individual AMA members. Frequency-management agreements, including an interference test report if the agreement indicates no interference exists, will be signed by all parties and copies provided to AMA Headquarters.
7. With the exception of events flown under official AMA *Competition Regulations* rules, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for

the pilot and the pilot's helper(s) located at the flightline.

8. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual.
9. Radio-controlled night flying is limited to low-performance model aircraft (less than 100 mph). The model aircraft must be equipped with a lighting system which clearly defines the aircraft's attitude and direction at all times.
10. The operator of a radio-controlled model aircraft shall control it during the entire flight, maintaining visual contact without enhancement other than by corrective lenses that are prescribed for the pilot. No model aircraft shall be equipped with devices which allow it to be flown to a selected location which is beyond the visual range of the pilot.

FREE FLIGHT

1. I will not launch my model aircraft unless I am at least 100 feet downwind of spectators and automobile parking.
2. I will not fly my model aircraft unless the launch area is clear of all individuals except my mechanic, officials, and other fliers.
3. I will use an effective device to extinguish any fuse on the model aircraft after the fuse has completed its function.

CONTROL LINE

1. I will subject my complete control system (including the safety thong where applicable) to an inspection and pull test prior to flying. The pull test will be in accordance with the current *Competition Regulations* for the applicable model aircraft category. Model aircraft not fitting a specific category shall use those pull-test requirements as indicated for Control Line Precision Aerobatics.
2. I will ensure that my flying area is clear of all utility wires or poles and I will not fly a model aircraft closer than 50 feet to any above-ground electric utility lines.
3. I will ensure that my flying area is clear of all nonessential participants and spectators before permitting my engine to be started.

SPECIALIZED SUPPLEMENTAL SAFETY
CODES, STANDARDS AND REGULATIONS
RADIO CONTROL COMBAT (#525)
GENERAL RADIO CONTROL RACING (#530)
GIANT SCALE RADIO CONTROL RACING (#515-A)
GAS TURBINE OPERATION (Note: Special waiver required) (#510-A)
These special codes and appropriate documents may be obtained either from the AMA Web site or by contacting AMA Headquarters.

In addition, and as an example of the cooperation and joint effort between the Academy and the FAA, an Advisory Circular (AC), "Model Aircraft Operating Standards," was created in July 1972 designated AC 91-34, and later revised in June 1981 as AC 91-57 for the purpose of outlining and encouraging voluntary compliance with safety standards for model aircraft operators. A copy of the current document is also included for your review.

Contained on page 5:

AC 91-57

DATE June 9, 1981

ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Washington, D.C.

Subject: *MODEL AIRCRAFT OPERATING STANDARDS*

1. PURPOSE. This advisory circular outlines, and encourages voluntary compliance with, safety standards for model aircraft operators.

2. BACKGROUND. Modelers, generally, are concerned about safety and do exercise good judgement when flying model aircraft. However, model aircraft can at times pose a hazard to full-scale aircraft in flight and to persons and property on the surface. Compliance with the following standards will help reduce the potential for that hazard and create a good neighbor environment with affected communities and airspace users.

3. OPERATING STANDARDS.

a. Select an operating site that is of sufficient distance from populated areas. The selected site should be away from noise sensitive areas such as parks, schools, hospitals, churches, etc.

b. Do not operate model aircraft in the presence of spectators until the aircraft is successfully flight tested and proven airworthy.

c. Do not fly model aircraft higher than 400 feet above the surface. When flying aircraft within 3 miles of an airport, notify the airport operator, or when an air traffic facility is located at the airport, notify the control tower, or flight service station.

d. Give right of way to, and avoid flying in the proximity of, full-scale aircraft. Use observers to help if possible.

e. Do not hesitate to ask for assistance from any airport traffic control tower or flight service station concerning compliance with these standards.

R.J. VAN VUREN
Director, Air Traffic Service

Initiated by: AAT-220

Purpose

I am before you today to speak on behalf of the AMA and its members to preserve our privilege to operate in the National Airspace System - a system which is being asked to make room for the burgeoning Unmanned Aerial Vehicle (UAV) community and the vehicles they are creating for commercial and military purposes. It is not the intent of the Academy to in any way impede such development, evolution, and acceptance, and we are fully aware of the market and utility of such vehicles in enhancing the lives of us all. We do, however, note that because of the superficial similarities between model aircraft and UAVs the potential does exist to look at them as one group which would be completely inappropriate. They may look the same, but they are definitely different and that difference is not in their appearance but grounded solidly in their intended uses.

I have included the definition of a model aircraft and operator; please see below:

- The Academy of Model Aeronautics (AMA) defines a model aircraft and its operation as follows:

A non-human-carrying device capable of sustained flight in the atmosphere, not exceeding the limitations established in the Official AMA National Model Aircraft Safety Code, exclusively for recreation, sport, and/or competition activities.

The operators of radio control model aircraft shall control the aircraft from the ground and maintain un-enhanced visual contact with the aircraft throughout the entire flight operation. No model aircraft shall be equipped with devices that would allow for autonomous flight.

As can be determined from these definitions, the focus of the AMA is on recreation, sport, and competition activities that are available to model aviation participants, and our 70 years of overseeing this sport speaks highly of the ability of the AMA and its members to continue to operate effectively in a cooperative manner with the related governmental and non-governmental agencies. Our purpose and the purpose of our sport sets us apart from the UAV community, and even the general aviation community, but our remarkable track record of safe operations during that 70 years, involving thousands of participants throughout this country speaks volumes about our ability to continue to self-regulate our sport.

Though it may be true that UAVs evolved from model aircraft, like any other evolutionary sequence the root entity maintains its own identity as the newly evolved example progresses on a different search for its own identity. Model airplanes may have been a huge contributing factor in the development of UAVs, but model airplanes are still model airplanes, fulfilling their intended purpose (recreation, sport, and competition) as they have for decades. UAVs, on the other hand, are the relatively new entity, just beginning to discover their reasons for being, their purpose, and their place in the grand scheme of things. They are different and completely separate from model aircraft.

Our request to this committee is that model airplanes be permitted to continue operating within the National Airspace System, as we have for more than 70 years, as we commit to tirelessly working with all pertinent government agencies, in particular the FAA, as we always have, to guarantee the safe and sound operation of model aircraft in this country. We request that model aviation not be innocently sucked into a black hole of regulation, a place in which, based on its long and successful history, it does not deserve to be.

Thank you for your time, understanding, and consideration in this very important matter.